

POSITIONS AND AREAS OF SUN SPOTS—Continued

Date	Eastern standard civil time		Heliographic			Area		Total area for each day
			Diff. long.	Longi- tude	Latitude	Spot	Group	
1929								
Sept. 7 (Naval Observa- tory).	h. m.	10 37	°	°	°			
			-55.0	167.5	-9.5	46		
			-27.5	195.0	+21.0	40		
			-5.0	217.5	+13.5			
			+19.5	242.0	-13.0		3	
			+42.0	264.5	-5.0		201	
			+50.5	273.0	+10.0		46	342
Sept. 8 (Naval Observa- tory).	10 41	-48.5	160.8	-6.0	6			
		-42.0	167.3	-10.0	34			
		-38.0	171.3	-3.5	3			
		-14.5	194.8	+20.5	40			
		+9.5	218.8	+13.5		25		
		+14.0	223.3	+2.0		6		
		+54.5	263.8	-5.0		170		
		+65.5	274.8	+9.0		28		
							312	
Sept. 9 (Naval Observa- tory).	12 15	-33.5	161.7	-6.5	6			
		-28.0	167.2	-10.5		40		
		-22.0	173.2	+15.5	6			
		-1.0	194.2	+20.5	46			
		+22.5	217.7	+13.5		15		
		+69.0	264.2	-4.5		154		
		+80.5	275.7	+10.0	15			
							282	
Sept. 10 (Naval Observa- tory).	11 20	-76.0	106.5	+5.5	62			
		-44.0	138.5	+23.0	6			
		-20.5	162.0	-6.0		12		
		-15.0	167.5	-10.0	12			
		-8.0	174.5	+15.0	6			
		+11.5	194.0	+21.0	31			
		+82.5	265.0	-4.0		139		
							268	
Sept. 11 (Naval Observa- tory).	11 0	-63.0	106.5	+5.0	31			
		-2.0	167.5	-10.0	15			
		+24.0	193.5	+21.0	25		71	
Sept. 12 (Naval Observa- tory).	10 52	-73.5	82.8	+15.5	15			
		-44.0	112.3	+5.0		62		
		-38.5	117.8	+38.5	3			
		+10.5	166.8	-10.5		9		
		+19.5	175.8	+16.0		18		
		+33.0	189.3	-16.0	3			
		+37.5	193.8	+21.0	18			
		+61.0	217.3	+5.0		6	134	
Sept. 13 (Naval Observa- tory).	10 51	-86.5	56.6	-7.0	123			
		-59.0	84.1	+15.5	6			
		-31.5	111.6	+5.0		46		
		+25.0	168.1	-10.0	6			
		+32.5	175.6	+16.0		31		
		+51.0	194.1	+21.0	15			
		+77.0	220.1	+5.5	15			
							242	
Sept. 14 (Naval Observa- tory).	10 38	-73.0	57.1	-8.0	62			
		-18.0	112.1	+4.5		9		
		+47.0	177.1	+15.5		9	80	
Sept. 15 (Naval Observa- tory).	11 18	-58.5	58.0	-7.5	68			
		-9.0	107.5	+5.5		25		
		+17.0	133.5	+20.0	3			
		+59.5	176.0	+15.5		31	127	
Sept.16 (Naval Observa- tory).	10 39	-80.0	23.6	-21.0	185			
		-46.0	57.6	-8.0	49			
		+8.5	112.1	+5.0		46		
		+51.5	155.1	+4.0	6			
		+72.5	176.1	+15.5		108	394	
Sept. 18 (Naval Observa- tory).	11 1	-52.5	24.5	-21.0		154		
		-19.0	58.0	-8.0	46		200	
Sept. 19 (Naval Observa- tory).	11 1	-39.5	24.3	-21.0		154		
		-6.0	57.8	-8.0	31			
		+25.0	88.8	+21.0	6		191	
Sept. 20 (Naval Observa- tory).	10 40	-26.0	24.8	-21.0	154			
		+7.0	57.8	-8.0	22			
		+37.0	87.8	+21.0		37		
		+45.5	96.3	-14.0		62	275	

POSITIONS AND AREAS OF SUN SPOTS—Continued

Date	Eastern standard civil time	Heliographic			Area		Total area for each day
		Diff. long.	Longi- tude	Latitude	Spot	Group	
	<i>h.</i> <i>m.</i>	°	°	°			
Sept. 21 (Naval Observa- tory).	10 26	-27.0	10.8	+3.0		12	
		-26.5	11.3	-25.0		46	
		-13.0	24.8	-21.0	139		
		+3.0	40.8	-22.0	3		
		+20.5	58.3	-8.0	12		
		+50.5	88.3	+21.0		25	
		+59.5	97.3	-14.0		93	330
Sept. 22 (Harvard)-----	15 25	-9.0	13.0	-27.5	34		
		+6.0	28.0	-20.5	211		
		+75.5	97.5	-14.5		133	378
						154	
Sept. 23 (Naval Observa- tory).	12 10	+14.0	24.4	-21.5			
		+23.5	33.9	+9.5	3		
		+32.0	42.4	-12.0	6		163
Sept. 24 (Naval Observa- tory).	10 52	+17.5	15.4	+5.5	3		
		+26.5	24.4	-21.5		108	
		+46.5	44.4	+17.5	3		114
Sept. 25 (Naval Observa- tory).	10 33	+38.5	23.4	-22.0		52	52
Sept. 26 (Naval Observa- tory).	10 40	-68.0	263.6	+14.0	9		
		-57.0	274.6	+9.0		31	
		+53.5	25.1	-22.0	25		65
Sept. 27 (Naval Observa- tory).	10 33	-56.5	262.0	+12.0	9		
		-42.5	276.0	+9.0		46	
		-18.0	300.5	-9.0	3		58
Sept. 28 (Naval Observa- tory).	10 48	-36.0	219.2	+11.5	46		
		-41.5	263.7	+12.5	6		
		-29.0	276.2	+9.5		108	160
Sept. 29 (Naval Observa- tory).	10 38	-75.0	217.1	+11.5		62	
		-27.0	265.1	+12.5		6	
		-14.5	277.6	+10.0		123	191
Sept. 30 (Mount Wilson)	13 30	-60.0	217.3	+12.0		104	
		0.0	277.3	+11.0		254	358
Mean daily area for Sep- tember							202

PROVISIONAL SUN-SPOT RELATIVE NUMBERS FOR SEPTEMBER, 1929¹

[Data furnished through the courtesy of Prof. W. Brunner, University of Zurich, Switzerland]

September, 1929	Relative numbers	September, 1929	Relative numbers	September, 1929	Relative numbers
1	9	11	39	21	55
2	17	12	31	22	² 44
3	31	13	53	23	35
4	28	14	25	24	13
5	³ M 49	15	32	25	10
6	49	16	26	26	³ E 23
7	³ M 62	17	⁴ 38	27	25
8	54	18	17	28	17
9	58	19	20	29	⁴ 43
10	56	20	³ W 43	30	² 40

Mean, 30 days=34.7.

¹ Dependent alone on observations at Zurich and its station at Arosa.² = Passage of an averaged-sized group through the central meridian.³ = New formation of a large or average-sized center of activity: E, on the eastern part of the sun's disk; W, on the western part; M, in the central zone.⁴ = Entrance of a large or average-sized center of activity on the east limb.

AEROLOGICAL OBSERVATIONS

By RICHMOND T. ZOCH

Free-air temperatures were below normal at practically all levels at all of the aerological stations. (See Table 1.)

Free-air relative humidity departures were variable at all stations excepting Due West, where there was a pronounced positive departure. This is significant in that the total precipitation for the month at this station was the greatest ever recorded. Vapor pressure departures were mostly below normal except at Due West.

The resultant winds had a southerly component at all levels over the western and eastern parts of the country.

(See Table 3.) Over the northern part of the country and over the Mississippi Valley the resultant winds had a northerly component.

Table 2 gives a summary of observations made at naval air stations. Those made at Washington, D. C., were formerly incorporated in Table 1, but as these data are now being computed by the naval air stations, they have been placed in a separate table. It should be noted there is close agreement between the free-air temperatures and relative humidities computed by the Weather Bureau and those computed by the naval air stations.